

RESPONSE

This is a response to the Advisory Action dated November 10, 2005. Claims 43-64 are pending in the application. In the Final Office Action of August 1, 2005, the Examiner objected to various informalities in the specification. In addition, the Examiner objected to claims 53 and 61 under 37 C.F.R. § 1.75(a) for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The examiner rejected claims 43-53 and 60-64 under 35 U.S.C. § 102(b) as being anticipated by “Global Positioning System applications at the Bonneville Power Administration” (“Street”). Claims 54-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Street in view of “Multichannel Continuous Harmonic Analysis in Real-Time (“Miller”).

The rejections from the Final Office Action of August 1, 2005 are discussed below in connection with the various claims. No new matter has been added. Reconsideration of the application is respectfully requested in light of the following remarks.

I. REJECTIONS UNDER 35 U.S.C. § 102

Independent claims 43 and 64 were rejected under 35 U.S.C. § 102(b) as being anticipated by Street. With this response, claims 43 and 64 have been amended for clarity and not for reasons relating to patentability. Applicant submits that Street does not anticipate claims 43, 60 and 64 for the reason that Street does not disclose all of the elements of each of these claims.

Claims 43, 60 and 64 relate to an energy measurement device or method for measuring electrical energy. The device discloses “at least one sensor...operative to sense at least one electrical parameter...and generate at least one analog signal.” The at least one analog to digital converter is coupled with the sensor and a processor is coupled with the analog to digital converter. A local synchronization circuit is coupled with a network, the processor, and at least one time synchronization receiver that generates at least one time synchronization signal. The local synchronization circuit is “operative to receive at least one timing clock signal from the network and generate a synchronized timing clock signal ... by

altering said at least one timing clock signal based on at least one of said at least one time synchronization signal.”

Street discloses the use of “the Global Positioning System (GPS) to enhance power system performance and reliability.” Street, p. 244, Summary. “The system [in Street] consists of remotes, synchronized by GPS, installed at cardinal power system nodes and a central master which polls the remotes for fault transient time-of-arrival data.” Street, p. 244, section 1. Introduction.

Street fails to disclose a timing clock signal that is altered as in claims 43, 60 and 64. The GPS receiver in Street “provides precise synchronization with UTC time allowing accurate phase angle determination.” Street, p. 247, Section 5.1. BPA’s experience to date. However, there is no timing clock signal. It is not disclosed in Street how UTC time is derived. It is possible that the timing signal from the GPS receiver is used by itself to calculate the UTC time without altering a timing clock signal. There is no disclosure of a timing clock signal that is altered. All Street discloses is “precise synchronization with *UTC time*.” *Id.* (emphasis added). UTC time is NOT a timing clock signal, rather it is a timing *standard* that is defined as “[u]niversal time, taking into account the addition or omission of leap seconds by atomic clocks each year to compensate for changes in the rotation of the earth.” *The American Heritage® Dictionary of the English Language*, Fourth Edition Copyright © 2000 by Houghton Mifflin Company. Synchronization to the standard time set by UTC time does NOT mean there was a timing clock signal that was altered for synchronization. All that is disclosed in Street is synchronization with the “common timing standard,” not a synchronization with a timing clock signal. *See* Street, p. 245, Section 4.1. Traveling Wave Fault Locator Principles (“A Fault Locator remote is actually a fancy electronic stopwatch synchronized to the *common timing standard* of UTC from GPS...”)(emphasis added). Applicant does not dispute that synchronization is disclosed in Street; however, the synchronization disclosed is with a “common timing standard,” rather than with a timing clock signal that is altered. Synchronization to the common timing standard of UTC does not require an existing timing clock signal that is altered as in claim 43.

In addition, Street fails to disclose a “timing clock signal from [a] network” as in claims 43 and 64. As discussed above, Street fails to even disclose a “timing clock signal.”

Accordingly, there is no disclosure that the “timing clock signal” is “from [a] network” as in claims 43 and 64.

Further, Street fails to disclose a local synchronization circuit. Street does disclose GPS timing receivers used to derive precise time. Street, p. 245, Section 3. GPS SYSTEM OVERVIEW. In Street, “[p]hasor measurement remote units... calculate phasors synchronized to Universal Coordinated Time (UTC) by GPS timing receivers.” Street, p. 244, Section 1. INTRODUCTION. Street discloses GPS timing receivers to derive precise time. Street, p. 245, Section 3. GPS SYSTEM OVERVIEW. The phasor measurement units (sometimes referred to as remote units), consist of a computer for measuring voltage or current phasors. Street, p. 247, Section 5.1 BPA’s experience to date, Figure 4. There is no disclosure of a local synchronization receiver. The GPS receiver disclosed in Street may be a time synchronization receiver, but then it is not a local synchronization receiver as in claim 43.

For at least these reasons, Street does not anticipate independent claims 43, 60 and 64. Accordingly, Applicant requests that the Examiner withdraw this rejection of claims 43, 60 and 64.

Dependent claims 44-53 and 61-63 were also rejected pursuant to 35 U.S.C. § 102(b) as being anticipated by Street. Dependent claims 44-53 and 61-63 should be allowed for the reasons set out above for the independent claims. Applicant therefore requests that the Examiner withdraw this rejection of these claims.

II. REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 54-59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Street in view of Miller. With this response, claim 54 has been amended for clarity and not for reasons relating to patentability. Neither Street nor Miller disclose all of the limitations of these claims. In particular, Street in view of Miller fail to disclose a local synchronization circuit as mentioned above.

Independent claim 54 relates to a “system for measuring the delivery of electrical energy.” The system comprises “a digital network” and “at least one device coupled with said network.” The “at least one device” discloses “at least one sensor...operative to sense at

least one electrical parameter ... and generate at least one analog signal.” At least one analog to digital converter is coupled with the sensor and a processor is coupled with the analog to digital converter. A local synchronization circuit is coupled with both the processor and at least one time synchronization receiver that generates at least one time synchronization signal. The local synchronization circuit is “operative to receive at least one timing clock signal from the network and generate a synchronized timing clock signal ... by altering said at least one timing clock signal based on at least one of said at least one time synchronization signal.”

Miller discloses a “flexible, modular multichannel continuous real-time harmonic analyzer with the capability of precision time stamping.” Miller, p. 1813, Abstract. The system “is designed primarily for the continuous analysis of power system harmonics in real-time” Miller, p. 1813, INTRODUCTION.

As was discussed above, Street fails to disclose a local synchronization circuit and a timing clock signal that is altered. Miller also fails to disclose a local synchronization circuit “coupled with [the] processor [and] operative to receive at least one timing clock signal from a network and generate [a] synchronized timing clock signal ... by altering said at least one timing clock signal from the network based on at least one of said at least one time synchronization signal” as in claim 54. Like Street, Miller fails to disclose a local synchronization circuit that alters a timing clock signal and generates a synchronized timing clock signal. Miller discloses instead precision time-stamping based on GPS signals. Miller, Abstract. Accordingly, Applicants request that the Examiner withdraw this rejection of independent claim 54 based on the arguments discussed above.

Dependent claims 55-59 were also rejected pursuant to 35 U.S.C. § 103(a) as being anticipated by Street in view of Miller. Dependent claims 55-59 should be allowed for the reasons set out above for the independent claim. Applicant therefore requests that the Examiner withdraw this rejection of dependent claims 55-59.

Attached hereto is a marked-up version of the specification with changes shown as well as an unmarked version of the specification.

CONCLUSION

Each of the rejections from the Final Office Action dated August 1, 2005 has been addressed and no new matter has been added. Applicants submit that all of the pending claims are in condition for allowance and notice to this effect is respectfully requested. The Examiner is invited to call the undersigned if it would expedite the prosecution of this application.

Respectfully submitted,

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Date

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